

June 2, 2015

Mr. Michael J. Sale
Executive Director
Low Impact Hydropower Institute

Subject: Phase 1 Re-certification Review for the Dodge Falls Hydroelectric Project (FERC Project No. 8011)

Dear Dr. Sale,

This letter presents Alden's Phase 1 review of the Low Impact Hydro Institute (LIHI) Re-certification Application for the Dodge Falls Hydroelectric Project located on the Connecticut River in New Hampshire and Vermont.

1 Recertification Standards

Section 2.25 "*Re-Certification Review*" of LIHI Certification Handbook (revised 04/09/2014) regarding Applications for Recertification provides that a "If no information is missing from the Re-Certification application package, and if the Application Reviewer has determined that there are no material changes or changes in LIHI's criteria, the Executive Director will post the package on the Institute's Web page and notify all parties so requesting that it has been posted. Once posted, any individual or organization may within 60 days submit comments on the Re-Certification Application Package to the Executive Director."

The re-certification review criteria also provide that "If no material changes have occurred and the criteria have not been changed, the Executive Director will issue a Low Impact Hydropower certification and post notice of the certification on the Institute's Web page."

It is Alden's understanding that if at the time of the LIHI re-certification review no further review will be required if:

1. No information appears to have been missing from the Re-Certification Application Package when it was submitted on May 20, 2014.
2. No "material changes" that would affect recertification have occurred at the Project.
3. LIHI's certification criteria have not been revised since the previous certification.

Alden has completed a preliminary review of the re-certification materials provided by LIHI for the Dodge Falls Project. The review focused on identification of any missing information and potential material changes at the Project. A review of publically available information and

stakeholder outreach was completed to identify potential material changes. These efforts and the information gained are summarized in this letter report.

2 Project Description

The Dodge Falls Hydroelectric Project is located on the Connecticut River in the Towns of Bath, New Hampshire, and Ryegate, Vermont. The Project provided waterpower to the adjacent paper mill until 1966. Between 1966 and 1990, the Project did not generate power and was used to supply process water to the mill. The Federal Energy Regulatory Commission (FERC) authorization was originally obtained in 1984 and Project operation began in 1990. The mill was shut down and the paper producing machinery removed in 2000. No process water is currently being drawn.

The 485 foot long dam is constructed of a grouted, rock fill, timber crib with a timber crest and wood plank facing. The dam crest elevation is 421.4 feet NGVD which is approximately 15.5 feet above the bedrock streambed at the downstream toe. At the time of inception the Project utilized 2 feet of pin supported wooden flashboards, as authorized, to reestablish historic impoundment levels. Construction of the Dodge Falls dam began in 1988 and was completed in 1990. The Dodge Falls Project consists of a reinforced concrete powerhouse located on the New Hampshire side of the river with a 75-foot concrete spillway constructed on the right side of the fore bay. The spillway is connected to the original timber crib dam. A single double regulated 5000 kW Escher Wyse turbine, rated at 12 feet of head and a flow of 5800 cfs, is installed in the powerhouse. In 1993 the portion of the pin supported wooden flashboards located over the concrete spillway was replaced with a two-foot tall rubber pneumatic flashboard system. In 1997 the two-foot rubber pneumatic flashboard system was extended to the timber crib dam, replacing the remaining wooden flashboards.

The Dodge Falls Project is operated as a run of river facility. A pond level control system is used to maintain reservoir water level. The Project is required to maintain a minimum flow of 1,108 cfs (0.5 csm) or Project inflow, whichever is less. The Fifteen Mills Falls Hydroelectric Project (“the FMF Project”)(FERC # 2077) is located immediately upstream of The Dodge Falls Project. The FMF Project consists of three separate dams and powerhouses. The closest FMF Project, the McIndoes power station, is located approximately 4 miles upstream of the Dodge Falls Project. Available river flow for the DF Project is determined by discharge from the McIndoes Project.

The Dodge Falls Project received a FERC license exemption on June 11, 1984. The Project applied for LIHI low impact certification on June 1, 2009. Certification was awarded on August 29, 2009 and expired June 1, 2014.

3 Findings

Alden has completed a preliminary review of the materials provided by LIHI for the Dodge Falls Project, including the re-certification application documents. After contacting several state and federal agencies that are responsible for the management of aquatic resources and water quality in the project area, Alden became aware that two of the agencies had requested additional information and/or data in order to determine if the project operation was in compliance with

flow and water quality requirements. Mr. Jeffrey Crocker of the Vermont Department of Environmental Conservation (VDEC) indicated that they had requested, but did not receive, operations information from the applicant, including any information on non-compliance events, to confirm that the project was complying with the state's 401 certification (seen email correspondence between Mr. Crocker and Mr. Stephen Amaral in Attachment A). Additionally, an email from Ted Walsh at the New Hampshire Department of Environmental Services (NHDES) provided documentation that they also requested water quality information and data and provided recommendations and guidelines for collecting such data, in order for NHDES to confirm compliance with water quality requirements (see email correspondence between Mr. Walsh and Mr. Amaral in Attachment A). A letter submitted to the applicant on June 18, 2014 indicated that for NHDES to make any determination on the LIHI re-certification for Dodge Falls the following additional information would be required:

- Water quality monitoring data (temperature, DO, phosphorus and Chlorophyll)
- Pond fluctuation data
- Minimum flows data
- Fish passage (letters from NHFG and USFWS)

It is Alden's understanding that this additional information was not received by NHDES.

In addition to Mr. Walsh and Mr. Crocker, Alden also solicited feedback on the Dodge Falls re-certification from Ms. Carol Henderson (New Hampshire Fish & Game), Mr. M. Coppola (New Hampshire Natural Heritage Bureau), and Gregg Comstock (NHDES; Mr. Comstock was cc'd on the email from Mr. Walsh to Mr. Amaral) via email on May 8, 2010.

Mr. Amaral discussed the Project's LIHI recertification with Mr. John Warner of the US Fish & Wildlife Service (FWS) on May 8, 2015 during a telephone conversation. Mr. Warner indicated that FWS, to the best of its knowledge, believed the project was in compliance with FERC license requirements, including those for fish passage, and the agency had no concerns or issues with the operation of the Dodge Falls Project with respect to the fishery resources that they are involved with.

A review of public information available on the FERC eLibrary, dating back to June 1, 2009, when the original LIHI Certification Application was submitted, was completed. No violations or compliance issues were noted.

4 Further Action

The results of Alden's evaluation of the of the Dodge Falls Hydroelectric Project re-certification application are:

1. Requests for operations and water quality information were made by two state agencies (VDEC and NHDES) after the Re-Certification Application was submitted to LIHI. It does not appear that these information requests have been addressed by the applicant. Without this additional information, the VDEC and NHDES have not been able to make

a determination on whether the project is in compliance with 401 certification and FERC license requirements relevant to aquatic resources and, consequently, whether LIHI re-certification would be acceptable to each agency.

2. No “material changes” that would affect recertification have occurred at the location of the Project were identified and;
3. LIHI’s certification criterion has not been revised since the previous certification.

5 Conclusion

Based on the above findings, I recommend recertification of the Dodge Falls Hydroelectric Project with the following condition:

Condition 1. The facility owner shall consult with the NHDES to develop a water quality monitoring plan to define current water quality conditions at the Dodge Falls dam and powerhouse, shall implement that plan, and shall report the results to NH DES and to LIHI within six months of the date of recertification. If the facility is found to be the cause of any violations of state water quality standards, the facility owner shall notify LIHI within 30 days of such a finding and shall develop a remediation plan to correct the violations. LIHI reserves the right to suspend or rescind its certification if successful remediation is not implemented.

Please contact me if you have any questions.

Best Regards,



Stephen V. Amaral
Principal Fisheries Biologist